

Application Serial No. 10/524,695
Reply to Office Action of March 18, 2008

PATENT
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Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application. Amendments reflect changes to the immediate prior version of claims pending in this application.

Listing of claims:

1-5. (cancelled)

6. (withdrawn) A means of compressing pipe couplings comprising two concentric press surfaces designed to be capable of supporting an axial pressure sufficient to preload a seal, is designed to compress the end portions of the pipes, further comprising two end sections connected to two or more rods, each rod being equipped with a hydraulic cylinder, the preload on the seal principally being retained by a corresponding threaded nut and collar after removal of the preloading tool.

7. (withdrawn) A means in accordance with Claim 6, wherein the preloading tool comprises a nut runner.

8. (withdrawn) A means in accordance with Claim 7, wherein the nut runner is equipped with a cogwheel allocated to the rotation of a threaded collar with a toothed periphery of a rear portion of the collar.

9. (withdrawn) A means in accordance with Claim 7, wherein the nut runner is equipped with a cogwheel allocated to the rotation of a nut with a toothed periphery of a rear portion of the nut.

10. (withdrawn) A pipe connector comprising:

a preloading tool;

first and second pipes each having a pre-stressing press surface capable of taking an axial pressure from the preloading tool; a first and a second flange disposed at an end of each pipe with means for accepting a seal;

one pipe end having a nut with, in a rear portion of the nut, a surface arranged to bear on the first flange and the nut being arranged also for accepting axial

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pressure from the preloading tool, and the other pipe end having a collar with a rear portion arranged for accepting axial pressure and an opposite end surface arranged to bear on the second compressingly towards the pipe ends, the collar being in threadable relationship with the nut, at least one of the nut and the collar being rotatable on the pipe.

11. (withdrawn) A pipe connector in accordance with Claim 10, wherein the nut has a flange an axial pressure from the preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the nut and directed towards the pipe flange.

12. (withdrawn) A pipe connector in accordance with Claim 10, wherein a rear portion of said collar has a toothed periphery.

13. (withdrawn) A pipe connector in accordance with Claim 10, wherein a rear portion of said nut has a toothed periphery.

14. (withdrawn) A method of connecting pipes, the pipes having at least at one end thereof a prestressing press surface and at ends thereof a sealing flange with means for accepting a seal, one pipe end having a nut with a surface arranged to bear on a flange and arranged also for accepting axial pressure from a preloading tool and the other pipe end having a collar being in threadable relationship with the nut, the nut or the collar or both being rotatable on the pipe, the method comprising:

inserting a seal between the pipe ends;

drawing the pipe ends together; fitting the preloading tool around the drawn together pipe ends;

operating the preloading tool so as to draw the pipe ends into sealing relationship and apply axial prestressing pressure to the nut or the collar so as to compress the seal and to screw the collar and the nut together; and

releasing the prestressing pressure and withdrawing the preloading tool.

15. (withdrawn) The pipe connector as claimed in claim 12, wherein the collar is rotatable on the pipe and the preloading tool acts on said toothed periphery to screw said collar and said nut together.

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16. (withdrawn) The pipe connector as claimed in claim 15, wherein the nut has a nut flange at the mouth of the nut upon which the preloading tool is arranged to bear.
17. (withdrawn) The pipe connector claimed in 10 wherein the preloading tool has first and second end sections each having two parts arranged for fitting around drawn together pipe ends.
18. (withdrawn) The pipe connector as claimed in claim 17 wherein the preloading tool has hydraulic means for drawing the end sections together.
19. (withdrawn) The pipe connector as claimed in claim 12 wherein the preloading tool has a nut runner for driving the toothed periphery.
20. (withdrawn – currently amended) The pipe connector ~~A method~~ as claimed in claim 10 wherein the preloading tool is arranged for remote operation.
21. (new) A means of connecting at least two pipes, comprising a seal, flanges, a threaded portion and a nut,
wherein an end portion of each pipe is equipped with a concentric press surface located immediately proximal to the periphery of the pipe and designed to be capable of taking an axial pressure from a preloading tool; and
wherein the nut comprises a rear end portion arranged with an internal load bearing surface corresponding to the flange, an opposing end portion arranged with an external flange designed to be able to take an axial pressure from the preloading tool, and a mid portion therebetween comprising an internal threaded portion.
22. (new) The means in accordance with Claim 21, wherein a first end portion of a threaded collar is designed to be able to take an axial pressure from the preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange.
23. (new) The means in accordance with Claim 22, wherein the first end portion of said collar has a toothed periphery.
24. (new) The means in accordance with Claim 22, wherein a first end portion of said nut has a toothed periphery.

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SUMMARY OF INTERVIEW WITH EXAMINER

Applicant's undersigned representative spoke with the Examiner of record, Examiner Jay Ripley, by telephone today (May 19, 2008). The restriction requirement issued July 9, 2007 in this application was reviewed, as was Applicant's election of Group I (original claims 1-5), directed to a "means for connecting pipes". Other Office Actions and responses to those Actions were also reviewed. The undersigned representative provided the Examiner with a copy of the bibliographic page and claim page of a European application counterpart to the present application, now granted as EP 1 534 986 B1. The undersigned representative directed the Examiner's attention to granted European claim 10, submitted to the Examiner that this claim is directed to a means for connecting pipes in keeping with the invention elected in response to the July 2007 Office Action, and respectfully requested that the Examiner allow the claim to be submitted and prosecuted in this application. The Examiner reviewed European claim 10 and responded that such a claim does not fall with the scope of the elected invention in view of the positive recitation of a preloading tool; the Examiner further indicated that elements of non-elected claim 6 may not be combined with the elements of claim 1 at this stage of prosecution. The Examiner also advised that prosecuting a version of European claim 10 (or the claims pending in this application prior to the filing of this Amendment) would constitute an undue burden on the Examiner to search the art for a preloading tool not previously elected or searched for. Accordingly, the Examiner rejected the undersigned representative's request to accept the pending claims, or a version of granted European claim 10, for further prosecution.

REMARKS/ARGUMENTS

In the present Action, the Examiner indicates that claims 10-20 are directed to a non-elected invention. While Applicant does not necessarily agree with this or other of the Examiner's statements in the present Action, Applicant respectfully withdraws claims 10-20 and submits new claims 21-24 are directed to the invention designated as Group I in the Office Action dated July 9, 2007.

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With reference to paragraph 11 of the Office Action dated October 18, 2007, Applicant submits new claims 21-24 overcome the objection set forth in paragraph 11.

With reference to paragraph 15 of the October 18, 2007 Office Action, Applicant submits that new claim 21 provides sufficient antecedent basis for, and indicates a number of, pipes that comprise the present invention. With reference to paragraphs 16-22 of the October 2008 Action, Applicant submits that the terms "the preload", "a corresponding threaded nut" and "rear portion" do not occur the pending claims. Applicant respectfully submits that the objections in paragraphs 15-22 should not be maintained with regard to the pending claims therefore.

With reference to paragraphs 23-29 of the October 18, 2007 Office Action, Applicant submits that new claims 21-24 are novel over Chapman et al, EP 0231076 A1. As mentioned in the Amendment filed on January 18, 2008, the scope of Chapman differs greatly from that of the present invention. Despite the disclosure of sealing members and fitting members, the cited document does not deal with the core of the present invention, i.e. the pretensioning of the nut prior to engagement of the nut and the male thread portion of the adjacent pipe. Even though Chapman discloses the feature of a nut exhibiting an internal surface of contact at the rear portion of the nut formed in a manner such that when the nut is carried out over the flange, the internal ledge at the rear edge of the nut abuts the radial rear face of a pipe end flange, the opposite end of the nut does not have any means, such as an external flange, for receipt of a spanning tool capable of tensioning the nut in an axial direction. The Applicant disagrees with the rejection in the view of Chapman disclosing press surfaces designed to be capable of taking an axial pressure from a preloading tool. The end portions of the fittings 114A, 114B are chambered and are not capable of receiving a preloading tool. Nor is there any flange at the forward end of the fitting member 302 capable of retaining the opposite end of the preloading tool. Furthermore there is no indication at all of the pretensioning of the fitting members 302, 304 prior to screw tightening the joint. Furthermore the female collar 304 does not exhibit the means of being compressed by a preloading tool prior to the tightening of the fitting members, the female collar exhibiting an internal flange contact surface 308 at the rear end, which is the only possible area for applying a preloading force on the disclosed collar. At least for the foregoing reasons, the

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present invention as claimed differs from the disclosure made by Chapman.

In light of the foregoing response, all the outstanding objections and rejections are considered overcome. Applicant respectfully submits that this application should now be in condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,



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